

Application No : 10/518,436  
Amdt dated: April 18, 2007  
Reply to Office action of January 22, 2007

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Amended) A clip applier for applying a surgical clip in a patient, comprising:

a disposable cartridge including an elongate tube having a proximal end and a distal end, a pair of opposing jaw members extending outwardly from the distal end of the elongate tube, and a one-way ratchet mechanism, the ratchet mechanism including fixed mating teeth; and

a reusable actuating mechanism coupled to the proximal end of the elongate tube to move the jaw members between an open position and a closed position.

2. (Amended) The clip applier of Claim 1, wherein the ratchet mechanism is ~~a one-way ratchet providing~~ adapted to provide a full actuating stroke of the clip applier before an engagement in the ratchet mechanism releases and returns to the original position.

3. (Original) The clip applier of Claim 1, wherein the ratchet mechanism is formed from injection molded plastic

4. (Original) The clip applier of Claim 1, wherein said actuating mechanism comprises:

a main body connected to the proximal end of the elongate tube; and  
an actuating handle coupled to the main body such that movement of the handle in relation to the main body forces the jaw members to move relative to each other between the open position and the closed position.

5. (Original) The clip applier of Claim 1, wherein said cartridge further comprises a push member for advancing the clip into the jaw members.

6. (Original) The clip applier of Claim 5, wherein said cartridge further comprises a biasing spring for maintaining said push member against the clip.

7. (Amended) The clip applier of Claim 6, wherein said cartridge further comprises a drive coupling operatively connected to a sliding ratchet pawl for engaging [[with]] the fixed mating teeth of the ratchet mechanism, the fixed mating teeth being formed on an inner surface of the elongate tube.

8. (Original) The clip applier of Claim 7, wherein the ratchet pawl includes a cantilever arm that engages with the mating teeth.

9. (Original) The clip applier of Claim 7, wherein the drive coupling provides a central connection of the ratchet pawl allowing a degree of pivoting and improved seating of the mating teeth.

10-14. (Canceled)

15. (Amended) A clip applier for applying a surgical clip in a patient, comprising:

a disposable cartridge including a housing member having a proximal portion and a distal portion, a pair of opposing jaw members extending outwardly from the distal portion of the housing member, and a one-way ratchet mechanism, the ratchet mechanism including fixed mating teeth; and

a reusable actuating mechanism coupled to the cartridge to move the jaw members between an open position and a closed position.

16. (Amended) The clip applier of Claim 15, wherein the ratchet mechanism is a one-way ratchet providing adapted to provide a full actuating stroke of the clip applier before an engagement in the ratchet mechanism releases and returns to the original position.

17. (Original) The clip applier of Claim 15, wherein the ratchet mechanism is formed from injection molded plastic.

18. (Previously presented) The clip applier of Claim 15, wherein said actuating mechanism comprises:

a plurality of tips connected to said jaw members; and

an actuating handle coupled to the tips such that movement of the handle in relation to the tips forces the jaw members to move relative to each other between the open position and the closed position.

19. (Original) The clip applier of Claim 15, wherein said cartridge further comprises a jaw loader for advancing the clip into the jaw members.

20. (Original) The clip applier of Claim 19, wherein said cartridge further comprises a biasing spring for maintaining said jaw loader against the clip.

21. (Amended) The clip applier of Claim 20, wherein said cartridge further comprises a drive bushing operatively connected to the housing member and to the jaw loader for engaging ~~[[with]]~~ the fixed mating teeth of the ratchet

mechanism, the fixed mating teeth being formed on an inner surface of the housing member.

22. (Original) The clip applier of Claim 21, wherein the drive bushing includes a cantilever arm that engages with the mating teeth.

23. (Original) The clip applier of Claim 21, wherein the drive bushing provides a central connection of the jaw loader allowing a degree of pivoting and improved seating of the mating teeth.

24-27. (Canceled)

28. (New) The clip applier of Claim 7, wherein the ratchet mechanism is a first ratchet mechanism and the disposable cartridge further comprising a second ratchet mechanism.

29. (New) The clip applier of Claim 28, the second ratchet mechanism being substantially a mirror image of the first ratchet mechanism.

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30. (New) The clip applier of Claim 29, the first and second ratchet mechanisms being adapted to equalize the bearing forces on each side of the drive coupling.

31. (New) The clip applier of Claim 21, wherein the ratchet mechanism is a first ratchet mechanism and the disposable cartridge further comprising a second ratchet mechanism.

32. (New) The clip applier of Claim 31, the second ratchet mechanism being substantially a mirror image of the first ratchet mechanism.

33. (New) The clip applier of Claim 32, the first and second ratchet mechanisms being adapted to equalize the bearing forces on each side of the drive bushing.